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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,965	11/13/2001	Pierre Colas	EGYP 3.0-015	4646

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EXAMINER	
ROBINSON, HOPE A	

ART UNIT	PAPER NUMBER
1653	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/066,965	COLAS ET AL.	
	Examiner	Art Unit	
	Hope A. Robinson	1653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-83* is/are pending in the application.

4a) Of the above claim(s) *1-62 and 83* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *63-66 and 77-82* is/are rejected.

7)☒ Claim(s) *67-76* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 February 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/28/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Application Status

1. Applicant's election without traverse of Group VI (claims 63-82) on August 16, 2004 is acknowledged. Claims 1-62 and 83 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

2. The Preliminary Amendment filed on March 21, 2002 has been received and entered.

Drawing

3. The drawings filed on February 19, 2003 are objected to because Figure 1A and B, Figure 2 and Figure 3 are not very clear and it is difficult to discern the individual lanes. In addition, only Figures 1-10 are presently in the application, Figures 11-16 are missing, therefore, cannot be considered.

Correction is required.

Information Disclosure Statement

4. The Information Disclosure Statement filed on June 28, 2002 has been received and entered. The references cited on the PTO-1449 Form have been considered by the examiner and a copy is attached to the instant Office action.

Specification

5. The specification is objected to because of the following informalities:

(a) The specification is objected to because trademarks are disclosed throughout the instant specification and not all of them are capitalized or accompanied by the generic terminology. The use of the trademarks such as CELLQUEST™ for example, have been noted in this application (see page 44). It should be capitalized wherever it appears and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

(b) The specification is objected to because of the present arrangement. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)),

and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Correction of the above is required.

Sequence Compliance

6. This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR1.821 through 1.825; applicant's attention is directed to the final rule making notice published at 55FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). To be in compliance, applicant is required to identify all amino acid sequences of at least 4L-amino acids and at least 10 nucleotides by a sequence identifier, i.e., "SEQ ID NO:". The specification discloses sequences that have not been identified by a sequence identifier, see for example page 28, lines 25 and 29. In addition, claims reciting

sequences must also be identified by the sequence identifiers. If these sequences have not been disclosed in the computer readable form of the sequence listing and the paper copy thereof, applicant must provide a computer readable form of the "Sequence Listing" including these sequences, a paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification, and a statement that the content of the paper and computer readable form copies are the same and, where applicable, include no new matter as required by 37 CFR 1.821(e) or 1.821(f) or 1.821(g) or 1.821(b) or 1.825(d).

Compliance with the sequence rules is required.

Oath/Declaration

7. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: Non-initialed and/or non-dated alterations have been made to the oath or declaration, for inventor Brent Roger. See 37 CFR 1.52(c).

Correction is required.

Claim Objection

8. Claims 63-82 are objected to because of the following informalities:

(a) For clarity it is suggested that claim 63 is amended to recite "An intracellular recognition molecule" and "An oligomeric intracellular recognition molecule", instead of " Intracellular recognition molecule" and "Oligomeric intracellular recognition molecule"

(b) For clarity and precision of the claim language, it is suggested that claims 64-66, 78 and 80-82 are amended to recite "The" in the beginning of the claim, for example, "The intracellular recognition molecule R according to claim 63" (see claim 64).

(c) Claims 67-76 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 67 cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 67-76 have not been further treated on the merits.

(d) For clarity it is suggested that claim 79 is amended to recite, "A dimeric intracellular recognition", instead of "Dimeric intracellular recognition ".

Correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 63-66 and 77-82 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for intracellular recognition molecules that are peptide aptamer (such as the sequences disclosed on page 33 and anti-Cdk2 and others listed on page 12 of the specification as well as cited in the prior art), does not reasonably provide enablement for any intracellular recognition molecule or target. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The enablement requirement refers to the requirement that the specification describe how to make and how to use the invention. There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is undue. These factors include, but are not limited to: Quantity of Experimentation Necessary; Amount of direction or guidance presented; Presence or absence of working examples; Nature of the Invention; State of the prior art and Relative skill of those in the art; Predictability or unpredictability of the art and Breadth of the claims (see *In re Wands, 858 F.2d at 737, 8 USPQ2d at1404 (Fed. Cir. 1988)*. The factors most relevant to the instant invention are discussed below.

The amount of experimentation required to practice the claimed invention is undue as the claims encompass any intracellular recognition molecule and any target bound to any platform having the capacity to interact with the unspecified amount of targets. The specification discloses that using mutagenesis, recognition moieties R, particularly peptide aptamers were prepared (page 8) and a recognition moiety R is any

molecule which has the capacity to interact with high specificity and affinity within a cell with a target T (see page 9). However, the only intracellular recognition molecules exemplified are peptide aptamers, for example Cdk2 (see page 12, for example). The platform preferred is thioredoxin, and although thioredoxin-like moieties are also mentioned in the specification (see for example page 12), none is disclosed. The specification lacks adequate guidance with regard to the variable T (target). Additionally, the claims recite language such as "capable of" and "capacity to" which is not demonstrative of the claimed intracellular recognition molecule R possessing a function, as the term "capable of/capacity to" means that the intracellular recognition molecule R may not function as disclosed.

Note that the intracellular recognition molecule R comprises a recognition domain which is disclosed as "comprising or consists of or preferably" has for example, the amino acid sequence "QVWSLWALGWRWLRRYGWNM" (see page 60), which represents open and closed language in association with the structure and there is no indicia as to whether or not the structure once modified will retain the prescribed function or have biological activity. In addition, the preferred peptide is ten to forty amino acids, however, a 20-mer is exemplified. It is also disclosed on page 28 that the peptide can have a mutant having from one to five, preferably one to three amino acid changes with respect to said sequence and there is no indicia as to a conserved region or where in the sequence the modifications will occur and if said modification can be tolerated in the sequence. Due to the large quantity of experimentation necessary to generate the an intracellular recognition molecule comprising a domain that is variable

that can interact with any target and to screen same for activity and the lack of guidance/direction provided in the instant specification with regard to the variables in the invention, this is merely an invitation to the skilled artisan to use the current invention as a starting point for further experimentation. Thus, undue experimentation would be required for a skilled artisan to make and/or use the claimed invention commensurate in scope with the claims.

Predictability of which potential changes can be tolerated in a protein's amino acid sequence and obtain the desired activity requires a knowledge of and guidance with regard to which amino acids in the protein's sequence, if any, are tolerant of modification and which are conserved (for example, expectedly intolerant to modification), and detailed knowledge of the ways in which the protein's structure relates to its function. In addition, one skilled in the art would expect any tolerance to modification for a given protein to diminish with each further and additional modification, for example, multiple substitutions. In this case, the necessary guidance has not been provided in the specification. Therefore, while it is known in the art that many amino acid substitutions are possible in any given protein, the positions within the protein's sequence where such amino acid substitutions can be made with a reasonable expectation of success are limited, as certain positions in the sequence are critical to the protein's structure/function relationship. It is also known in the art that a single nucleotide or amino acid change or mutation can destroy the function of the biomolecule in many cases.

The state of the prior art provides evidence for the high degree of unpredictability as stated above. For example, various sites or regions directly involved in binding activity and in providing the correct three-dimensional spatial orientation of binding and active sites can be affected (see Wells, Biochemistry, vol. 29, pages 8509-8517, 1990). The instant specification provides no guidance/direction as to which regions of the protein would be tolerant of modifications and which would not, and it provides no working examples of any variant sequence that is encompassed by the claims. It is in no way predictable that randomly selected mutations, such as deletions, substitutions, additions, etc., in the disclosed sequences would result in a protein having activity comparable to the one disclosed. As plural substitutions for example are introduced, their interactions with each other and their effects on the structure and function of the protein is unpredictable. The skilled artisan would recognize the high degree of unpredictability that all the fragments/variants encompassed in the claims would retain the recited function.

The specification lacks adequate guidance/direction to enable a skilled artisan to practice the claimed invention commensurate in scope with the claims as the claims broadly read on any intracellular recognition molecule or target or platform. Furthermore, while recombinant and mutagenesis techniques are known in the art, it is not routine in the art to screen large numbers of mutated proteins where the expectation of obtaining similar activity is unpredictable based on the instant disclosure. The amino acid sequence of a protein determines its structural and functional properties, and predictability of what mutations can be tolerated in a protein's sequence and result in

certain activity, which is very complex, and well outside the realm of routine experimentation, because accurate predictions of a protein's function from mere sequence data are limited, therefore, the general knowledge and skill in the art is not sufficient, thus the specification needs to provide an enabling disclosure.

The working examples provided do not rectify the missing information in the instant specification, as the variables are described in vague terms. The nature and properties of this claim is difficult to ascertain from the examples provided as one of skill in the art would have to engage in undue experimentation to construct any intracellular recognition molecule with a variable domain having the capacity to specifically interact with any target.

The specification does not provide support for the broad scope of the claims, which encompass an unspecified amount of intracellular recognition molecules and targets which may or may not possess the ability to interact. The issue in this case is the breath of the claims in light of the predictability of the art as determined by the number of working examples, the skill level artisan and the guidance presented in the instant specification and the prior art of record. This make and test position is inconsistent with the decisions of *In re Fisher, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970)* where it is stated that "...scope of claims must bear a reasonable correlation to scope of enablement provided by the specification to persons of ordinary skill in the art...". Without sufficient guidance, determination of having the desired biological characteristics is unpredictable and the experimentation left to those skilled in

the art is unnecessarily and improperly extensive and undue. See *In re Wands, 858 F.2d at 737, 8 USPQ2d at 1404 (Fed. Cir. 1988).*

Thus, for all these reasons, the specification is not considered to be enabling for one skilled in the art to make and use the claimed invention as the amount of experimentation required is undue, due to the broad scope of the claims, the lack of guidance and working examples provided in the specification and the high degree of unpredictability as evidenced by the state of the prior art, attempting to construct and test all intracellular recognition molecules encompassed in the claims would constitute undue experimentation. Therefore, applicants have not provided sufficient guidance to enable one of skill in the art to make and use the claimed invention in a manner that reasonably correlates with the scope of the claims, to be considered enabling.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

10. Claims 63-66 and 77-82 are rejected under 35 U.S.C. 112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claims 63, 79 and the dependent claims hereto are indefinite for the recitation of "capable of" or "capacity to" as the terms do not necessarily mean that the recognition molecule possess that function as the terms mean that there are times when the function will not occur. Furthermore, it is unclear what else the recognition molecule is

"capable of" or has the "capacity to" do. It is suggested that the phrase "capable of" or "capacity to" is deleted from the claims.

(b) A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 64 recites the broad recitation "comprises", and the claim also recites "consists of" and "preferably" which is the narrower statement of the range/limitation.

(c) A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The

Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 66 recites the broad recitation "comprises", and the claim also recites "consists" which is the narrower statement of the range/limitation.

(d) Claim 77 lacks antecedent basis for "comprising from two to four intracellular recognition molecules R according to claim 63", because claim 63 recites "intracellular recognition molecule R". See also claim 78.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 63-66 and 77-79 are rejected under 35 U.S.C. 102(b) as being anticipated by Brent et al., WO 9602561 A1, 1 February 1996, based on the disclosure that a recognition moiety R is any molecule which has the capacity to interact with high specificity and affinity within a cell with a target T (see page 9).

Brent et al. teach two proteins capable of interacting, the first protein covalently bonded to a binding moiety which is capable of specifically binding to the DNA-binding-protein recognition site and the second protein covalently bonded also and being conformationally-constrained and measuring the interaction between the two proteins Claim 63). The peptides taught by Brent et al. are conformationally constrained intracellular peptides. Brent et al. teach a peptide recognition domain comprising a peptide that is identical to the one disclosed in the instant application, randomly generated (claim 65), see the alignment and a platform for example, thioredoxin (claim 66, see page 1 of the reference). The peptide taught by Brent et al. consists of 20 amino acids (claim 64), see the alignment. Although the claims recite functionally language and a K_d value, which is not disclosed by Brent et al., the claims recite the language "capable of" which does not necessarily demonstrate possession of a function and as the composition is taught by Brent et al. the function and K_d value are inherent properties, thus anticipated. Further, claims 77-79 are anticipated because dimeric and oligomeric recognition molecules are disclosed in the cited prior art since the reference discloses fusion proteins joined together and page 29 of the instant specification discloses a fusion of LexA-Cdk2 which is taught by the reference (page 34). Therefore, the limitations of the claims are met by the reference.

12. Claims 63-66 and 77-79 are rejected under 35 U.S.C. 102(b) as being anticipated by Colas et al., Nature, vol. 380, 11 April 1996 (cited on PTO-1449), based on the disclosure that using mutagenesis, recognition moieties R, particularly peptide

aptamers were prepared (page 8) and a recognition moiety R is any molecule which has the capacity to interact with high specificity and affinity within a cell with a target T (see page 9).

Colas et al. teach intracellular reagents that recognize specific targets and inhibit specific network connections. Colas et al. also teach peptide aptamers that bind tightly to their targets with disassociation constants of between 30 and 120nM (claim 63), see pages 546-550 of the reference. Colas et al. teach the expression of a combinatorial library of constrained 20-residue peptides (claim 64) displayed by the active site loop of *E. coli* thioredoxin and the use of a two-hybrid system to select those that bind human Cdk2 (claim 63). The peptide aptamers of the reference mimic the recognition function and recognized different epitopes on Cdk2 surface. Colas et al. teach that thioredoxin can be used as a scaffold to display such conformationally constrained peptides (claim 66). The reference discloses that peptides were arbitrarily selected (random peptide, claim 65). The reference also teaches oligomeric and dimeric intracellular molecules as fusions are disclosed of Cdk2-LexA (as disclosed on page 29 of the instant specification), see claims 77-79. Although the claims recite functionally language not disclosed in the reference, the language "capable of", does not necessarily demonstrate possession of a function and as the composition is disclosed by the reference, the function is an inherent properties, (see pages 548-550). Therefore, the limitations of the claims are met by this reference.

13. Claims 63-66 and 77-82 are rejected under 35 U.S.C. 102(b) as being anticipated by Colas et al., TIBTECH, vol. 16, August 1998 (cited on PTO-1449), based on the disclosure that using mutagenesis, recognition moieties R, particularly peptide aptamers were prepared (page 8) and a recognition moiety R is any molecule which has the capacity to interact with high specificity and affinity within a cell with a target T (see page 9).

Colas et al. describes the isolation of 14 different aptamers (intracellular recognition molecules) by screening transformants by their high specificity of interaction. The reference discloses that the peptide aptamers bind tightly to their target, with a dissociation constant (K_d) ranging between 30 and 120nm (claims 63, 65 and 66). The reference teach the production of conformationally constrained 20-amino acid variable regions (claim 64 and 77) that recognized the protein kinase cyclin-dependent kinase-2 (Cdk2), see page 359, left column of the reference. The variable regions were displayed using *E. coli* thioredoxin, used as a platform. The reference also discloses fusion proteins with LexA (page 358, right column), the fusion of two different domains (claim 77-79, page 355, right column) and two different binding sites (claim 81-82, page 358 right column). Therefore, the limitations of the claims are met by this reference.

Conclusion

14. No claims are presently allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hope Robinson whose telephone number is (703) 308-6231. The examiner can normally be reached on Monday-Friday from 9:00 am to 5:30 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon P. Weber, can be reached at (571) 272-0925.

Any inquiries of a general nature relating to this application should be directed to the Group Receptionist whose telephone number is (703) 308-0196.

Papers related to this application may be submitted by facsimile transmission. The official fax phone number for Technology Center 1600 is (703) 308-4242. Please affix the examiner's name on a cover sheet attached to your communication should you choose to fax your response. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG (November 15, 1989).

Hope Robinson, MS HR
Patent Examiner 10/29/04